



Comptroller of the Currency
Administrator of National Banks

Washington, DC 20219

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To: Chief Executive Officers of National Banks:

Last year, Acting Comptroller Julie Williams began a series of letters intended to inform and aid you in preparing your bank for the Year 2000. I plan to continue these and other communications as we move together through the final months of preparations. I can think of no higher priority for the industry and the OCC this year.

For ease of reading and reference, I have arranged the content of this letter as follows:

- Phase II Examination Results
- Rating Criteria
- Recent and Pending Regulatory Issuances
- Customer Awareness
- Environmental Systems Examination Procedures

Phase II Examination Results

We recently completed the first round of examinations using Federal Financial Institutions Examination Council (FFIEC) Phase II examination procedures. These procedures were designed to evaluate Year 2000 remediation efforts. During the first round of Phase II examinations, our examiners paid particular attention to the assessment of testing plans. The second round, now underway, will concentrate on evaluating testing results, business resumption contingency plans, and customer risk assessments and awareness programs. We expect to complete this second round by July.

The results of our examinations through December 31, 1998, showed 97 percent of the approximately 2,700 institutions supervised by the OCC (national banks, service providers, software vendors, Federal branches, and credit card banks) were rated "satisfactory" toward reaching Year 2000 readiness. Three percent were rated "needs improvement", and nine institutions were rated "unsatisfactory." The most common deficiencies cited in banks rated less than satisfactory were inadequate testing programs, inadequate vendor management, and incomplete customer risk assessments.

Rating Criteria

Our ratings definitions were previously provided to you. However, I also want to share with you clarifications to the criteria that we recently sent to our examiners.

Satisfactory - A bank should be rated “satisfactory” if it is expected to meet all FFIEC testing time frames on or shortly after the prescribed target dates; has a written testing program that adequately addresses all testing issues; has completed assessing material customers’ Year 2000 preparedness; has developed an adequate customer awareness strategy; and has adequate remediation contingency plans for mission-critical systems and has begun development of Year 2000 business resumption contingency plans.

Needs Improvement - A bank should be rated “needs improvement” if it is not expected to meet all FFIEC testing time frames on or shortly after the target dates; its written testing program does not adequately address all testing issues; its assessment of material customers’ Year 2000 preparedness is incomplete; its customer awareness strategy is incomplete or is not responsive to customer concerns; or its remediation contingency plans are inadequate and it has not begun development of Year 2000 business resumption contingency plans.

Unsatisfactory - A bank should be rated “unsatisfactory” if its testing is seriously behind schedule and not expected to meet the June 30, 1999, FFIEC deadline; does not have a written testing program; has not completed an assessment of its material customers’ Year 2000 preparedness; has not developed an adequate customer awareness strategy; does not have remediation contingency plans in place; or has not begun development of Year 2000 business resumption contingency plans.

Recent and Pending Regulatory Issuances

Year 2000 Safety and Soundness Guidelines - On October 16, 1998, the OCC issued Year 2000 Safety and Soundness Guidelines (OCC Bulletin 98-50).¹ These guidelines describe the steps that financial institutions must take to ensure that their mission-critical systems are Year 2000 ready. They are consistent with the Year 2000 guidance issued by the FFIEC and provide the banking industry with notice of agency expectations and the standards regarding Year 2000. Before any FFIEC agency can issue a safety and soundness order, it must give the bank written notice of failure to adhere to the standards and of the agency's intent to issue a safety and soundness order. The bank then has an opportunity to submit a compliance plan and otherwise respond in writing to the notice. A safety and soundness order will only be issued if the bank fails to submit and adhere to an acceptable plan or otherwise convince the agency that issuance of an order is not necessary.

¹The interim Safety and Soundness guidelines became effective October 15, 1998, and the comment period closed December 14, 1998. The OCC and the other FFIEC agencies plan to publish final guidelines shortly.

Contingency Planning - On December 11, 1998, the OCC released Advisory Letter 98-18, "Questions and Answers Concerning Year 2000 Contingency Planning." The issuance supplements the May 1998 "Guidance Concerning Contingency Planning in Connection with Year 2000 Readiness" and focuses in particular on developing Year 2000 business resumption contingency plans. This FFIEC Q&A guidance describes a number of important issues related to effective contingency planning, including the factors that financial institutions should consider in developing business resumption contingency plans. It states that financial institutions should seek ways to educate customers about the Year 2000 problem, consider the cash demands of their customers, anticipate funding needs in late 1999 and early 2000, and train their employees to ensure that they are prepared to implement Year 2000 business resumption contingency plans. This document establishes a target date of June 30, 1999, to substantially complete all Year 2000 business resumption contingency planning.

Customer Communications Outline - The OCC and the other FFIEC agencies are preparing supplemental customer awareness guidance by providing banks with a template for future communications with customers. We expect this supplemental guidance will be finalized shortly and released in February.

Customer Awareness

We believe that providing meaningful information to customers is an important part of a bank's Year 2000 project plan, and that banks are in the best position to communicate with their customers. In May 1998, the FFIEC issued guidance advising financial institutions to provide information on Year 2000 readiness efforts and to provide complete and accurate responses to questions raised by customers.

Some customer awareness programs that we have seen thus far are based primarily on answering customer questions, rather than proactively reaching out to them with information. I strongly encourage banks in this category to consider stepped up efforts such as providing informational brochures or other written disclosures in monthly or quarterly statements, establishing toll-free hot lines for customer inquiries, holding educational seminars, and posting Year 2000 information on their Internet sites.

The more effective customer awareness programs we have seen include the following elements:

- Delivering a consistent message throughout the organization, with senior management commitment and involvement. This includes providing effective employee training to ensure that only knowledgeable employees answer customer questions.
- Working with other financial institutions and community groups to inform the general public. This can be done in a number of ways, including: meeting with community and civic groups, making information available through banker associations, working with

the local press to ensure accurate reporting, and leveraging off work done by state and national bank trade associations.

Environmental Systems Year 2000 Examination Procedures

In an effort to assess progress in remediating environmental systems (elevators, HVAC, security, etc.), a team of OCC examiners reviewed the environmental systems of 30 national banks where OCC examiners are stationed. These examination procedures were developed by our personnel. These examinations revealed several common concerns, including: missing project plan milestones, inconsistent designation of environmental systems as mission-critical, and inadequate reporting to senior management. Many banks were concentrating on remediation of their information technology and paying insufficient attention to environmental systems.

Although these procedures are not part of our regular examination routine, a number of the banks involved in these examinations found the OCC-developed environmental procedures quite helpful and suggested that we distribute them to all national banks. In response to those suggestions, and to emphasize the importance of addressing environmental systems in your Year 2000 plans, I am enclosing a copy of the procedures with this letter for use as you deem appropriate.

Cooperative Efforts

We have found that cooperative efforts among groups of banks can be an effective way to address some Year 2000 challenges. Some banks have found that by working together to develop proxy tests, facilitate joint customer awareness programs, or participate in the formulation of contingency plans, they can better plan for and mitigate many Year 2000 risks. As of December 31, 1998, however, only 60 percent of banks had used proxy testing. The OCC and other FFIEC agencies encourage institutions to use proxy testing (as appropriate) as a more cost-effective way of testing mission-critical systems.² In addition to testing, banks that share markets may also find it appropriate to work together to develop customer awareness programs. Cooperation in developing business resumption contingency planning also can be an effective way to minimize the impact of Year 2000 disruptions.

Conclusion

Based on our examination results to date, national banks are making good progress toward Year 2000 readiness, however, the critical phases of testing and contingency planning are immediately before us and so I encourage all banks to re-double their efforts toward full and complete Year 2000 readiness.

²Proxy testing is addressed in OCC Advisory Letter 98-5 "Year 2000 Guidance on Testing" dated April 10, 1998, and in more detail in OCC Advisory Letter 98-13 "Year 2000 Q&A Guidance" dated August 27, 1998.

If you have any comments or would like additional information on the OCC's Year 2000 efforts, please let me know through the Assistant Deputy Comptroller with supervisory responsibility for your bank or, for banks in the large bank program, through your examiner-in-charge.

Sincerely,

John D. Hawke, Jr.
Comptroller of the Currency

[Attachment](#)

Year 2000 Environmental Systems Optional Examination Procedures

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Section 1: Examination Procedures Overview

The Year 2000 Challenge

The Year 2000 challenge is a serious and complex problem with an inflexible deadline. The coming of the turn of the century poses serious risks to both Information Technology (IT) and non-IT, or environmental, systems. Unlike IT systems in which the primary focus is the data processing involved, environmental systems refer to those systems that monitor, control, or provide interfaces to equipment or devices whose primary purpose is not traditional computer data processing. While all Year 2000 date problems can loosely be defined as “computer” problems, there are those specific to environmental systems. Non-IT (environmental) systems are those that have embedded date control logic. Embedded systems contain a computer or computer-like device, which is used to control the operation of machinery and plant equipment. These devices have software contained within the hardware and could be impacted by the processing of the Year 2000 date.

The main problem associated with the turn of the century is the inability of many computer programs or embedded systems to distinguish the year 1900 from the year 2000. In fact, many legacy computer operating systems, embedded systems, and programs typically store date fields in the “MMDDYY” format, where “YY” represents the last two digits of the year. Because this date format does not include a century indicator, the digits “00” for the year 2000 will be implicitly assumed to be 1900. The incorrect date interpretation may filter into the calculations performed by the computer programs causing erroneous results and, in many cases, the complete termination of system operations.

Introduction to the Examination Procedures

The examination procedures included in this package were modeled after the Federal Financial Institutions Examination Council’s (FFIEC’s) Year 2000 Phase II Work Program. They were developed as a risk-based examination tool and, as with other risk-based examination/supervisory tools, should be used in conjunction with critical thinking and sound judgement to ensure the effective application of the tool. The procedures apply to environmental systems in domestic institutions and in their foreign branches and subsidiaries. Although the examination procedures are not all inclusive and will not ensure that specific buildings or facilities are Year 2000 compliant, they do provide guidance for addressing the Year 2000 environmental systems issues and will help identify future actions necessary to mitigate Year 2000 risk. Specifically, the examination procedures are designed to meet the following objectives:

1. To determine whether the institution is effectively addressing environmental systems Year 2000-related issues and whether the project is meeting established timelines and key milestone dates.
2. To determine whether the institution has implemented an appropriate plan for renovating non-compliant environmental systems, testing all applicable environmental systems, and implementing renovated environmental systems into the production environment.
3. To assess the adequacy of the Year 2000 contingency plans for the institution’s environmental systems.
4. To determine whether further corrective action is necessary to assure the Year 2000 readiness of environmental systems.

In recognizing that the scope of the environmental systems review will vary based on the size of the institution, the examination procedures have been designed to address both large and community banks. Accordingly, the recommended work steps and level of detail addressed in the questions has been customized for different size organizations. The determination of how best to apply the examination

procedures to a particular organization should be considered on a case-by-case basis. If addressing a mid-size bank, appropriate portions of the large bank and community bank procedures can be used.

General Instructions

The examination procedures are divided into six phases (Awareness, Assessment, Renovation, Validation, Implementation, Contingency Planning*) which provide a risk-focused approach to a Year 2000 on-site review process. Each phase contains a series of work steps, related examination procedures, and a phase summary section:

1. **Work steps:** The work steps are designed to identify the appropriate documentation associated with the relevant Year 2000 project phases (i.e., Awareness, Assessment, etc.).
2. **Examination procedures:** The examination procedures are used to analyze the documentation to determine the adequacy of the institution's Year 2000 plans, processes, and overall Year 2000 efforts.
3. **Phase summary:** The phase summary sections are provided for summarizing the information gathered through the examination process.

The scope of the review should be appropriate to: the nature and sophistication of the entity under review, the institution management's understanding of the Year 2000 issue and its ability to oversee the institution's Year 2000 correction process, and the institution's current progress in completing its Year 2000 project phases. Note that not all institutions, or all environmental systems within an institution, may be in the same phase at the time of a review.

Additional Reference Documents

The Year 2000 environmental systems examination procedures were developed using several documents from the General Accounting Office (GAO) as well as OCC/FFIEC Interagency Statements. The following documents are available upon request:

- GAO Year 2000 Computing Crisis: Business Continuity and Contingency Planning Exposure, dated March 1998. (www.gao.gov/special.pubs/bcpguide.pdf)
- GAO Year 2000 Computing Crisis: An Assessment Guide, dated September 1997. (www.gao.gov/special.pubs/y2kguide.pdf)
- Interagency Guidance Concerning Contingency Planning in Connection with Year 2000 Readiness, dated May 1998. (OCC Advisory Letter 98-7; www.occ.treas.gov/y2k/98-07.pdf)
- Interagency Guidance Concerning Testing for Year 2000 Readiness, dated April 1998. OCC Advisory Letter 98-5; www.occ.treas.gov/y2k/98-05.pdf)
- Interagency Statement on Year 2000 Business Risk, dated December 17, 1997. (OCC Advisory Letter 97-10; www.occ.treas.gov/yek/97-10.pdf)
- Interagency Statement on Year 2000 Project Management Awareness, dated May 5, 1997. (OCC Advisory Letter 97-6; www.occ.treas.gov/y2k/97-06.pdf)
- Interagency Statement on the Effect of Year 2000 on Computer Systems, dated June 1996. (OCC Advisory Letter 96-4; www.occ.treas.gov/y2k/96-04.pdf)

* A description of the program management phase is located at the beginning of each examination procedure section.

Section 2: Environmental Systems Examination Procedures

Awareness Phase <p>Section 1 is intended to define the institution's awareness of the Year 2000 problem and how it relates to mission-critical environmental systems. The Awareness Phase will identify the executive level support for the resources necessary to perform compliance work on mission-critical environmental systems for the Year 2000. Additionally, the Awareness Phase evaluates the Year 2000 readiness of the institution by determining whether a Year 2000 program team and overall strategy has been developed.</p>	
Work Steps – Large Banks <ul style="list-style-type: none"> Obtain and review the institution's strategic/project plan for achieving Year 2000 readiness of its mission-critical environmental systems. Obtain and review the institution's mission-critical environmental systems' Year 2000 program management structure. 	
Work Steps – Community Banks <ul style="list-style-type: none"> Obtain and review the institution's environmental systems inventory for owned and leased systems. 	
Examination Procedures	Comments
Large Banks – Awareness	
<p>1. Determine whether the institution has a reasonable environmental systems Year 2000 strategic/project plan that addresses, at a minimum:</p> <ul style="list-style-type: none"> Program management structure Reporting requirements (when and to whom) Timeframes and sequencing of efforts Reasonable and attainable deadlines Solutions to achieve Year 2000 compliance for mission-critical systems in all leased and owned facilities (including overseas properties) on an institution-wide basis <p>Is the institution following the plan?</p>	<p><i>This procedure refers to assessing the institution's Year 2000 strategic/project plan for environmental systems. The plan should at a minimum address the awareness of the Year 2000 challenge and how it relates to mission-critical environmental systems, identify a Year 2000 program management structure, define reporting requirements and milestones, and describe an approach to achieving Year 2000 compliance. In addition, a determination should be made as to whether or not the institution has met to date the milestones established in the plan.</i></p>
<p>2. Determine whether the institution established a committee or other mechanism to ensure environmental systems Year 2000 efforts are communicated and coordinated among departments institution-wide.</p>	<p><i>This procedure refers to assessing that an effective mechanism has been established to ensure the Year 2000 efforts are communicated institution-wide.</i></p>

Community Banks – Awareness	
<p>1. Determine whether the responsible party (i.e., bank, lessor, etc.) has completed an environmental systems inventory that identifies mission-critical owned and leased systems.</p> <ul style="list-style-type: none">• Has the institution determined which of its facilities are mission critical?• Has the institution identified mission-critical environmental systems that exist within its mission-critical facilities?• Has the institution determined whether any mission-critical facilities or mission-critical environmental systems are leased?• Who performed the inventory (i.e., in-house, external consultant, etc.)?• When was the inventory completed?	<p><i>This process is used to assess whether the institution has completed a Year 2000 inventory which differentiates between mission critical and non-mission-critical owned and leased systems.</i></p>
Awareness Phase Summary	

Assessment Phase <p>During the assessment phase, the focus should be on the size and complexity of the problem to evaluate the magnitude of the effort necessary to address the Year 2000 mission-critical environmental systems. This phase should identify the mission-critical environmental systems and components that contain embedded microprocessor chips that could possibly be affected by the Year 2000 date change. The evaluation of mission-critical environmental systems (including leased/owned institution property) should be prioritized in the project plan and as part of the assessment process. Year 2000 compliance information for these systems should be obtained from the lessors, vendors, and/or manufacturers.</p>	
Work Steps – Large Banks <ul style="list-style-type: none"> Obtain and review the institution's Year 2000 assessment methodology document addressing specifically the mission-critical environmental systems. Review the assessment section of the institution's Year 2000 strategic/project plan for institution owned/leased mission-critical environmental systems/properties. Obtain and review the definition the institution is using for mission criticality and Year 2000 compliance for mission-critical environmental systems/properties. Obtain and review a sampling of the institution's Year 2000 mission-critical environmental systems inventory. Obtain and review a sampling of the institution's Year 2000 compliance information received from the lessors, vendors, and/or manufacturers. Obtain and review a sampling of the institution's status reports used to communicate the institution's Year 2000 efforts. 	
Work Steps – Community Banks <ul style="list-style-type: none"> Obtain and review a sampling of the institution's Year 2000 compliance information received from the lessors, vendors, and/or manufacturers. 	
Examination Procedures	Comments
Large Banks – Assessment	
1. Determine whether the institution completed its assessment of mission critical and non-mission-critical environmental systems by the OCC established milestone date of 9/30/97. <ul style="list-style-type: none"> What percentage of the Environmental Systems/Facilities assessment has been completed by the institution? 	<i>Institutions should have completed the assessment phase by September 30, 1997; however, some may have reassessed their systems and reassigned priorities. If assessments are not complete, determine the percentage of assessments ongoing (institutions may classify its assessment inventory at either the system level or the facility building level).</i>

<p>2. Determine whether the Year 2000 environmental systems strategic/project plan addresses:</p> <ul style="list-style-type: none"> • Mission criticality. • Prioritization of the inventory based on mission criticality. • Year 2000 compliance status (e.g., compliant, non-compliant, etc.). • Potential impact of Year 2000 mission-critical environmental system/facilities failures on institution operations 	<p><i>Institutions should have clearly defined mission criticality, Year 2000 compliance, and should have established a process to periodically evaluate assigned priorities. In addition, management should periodically reevaluate the priorities assigned to determine whether previously identified mission-critical items are still accurately identified.</i></p>
<p>3. Determine whether the institution has differentiated between Year 2000 leased mission-critical environmental systems/ facilities and owned mission-critical environmental systems/facilities.</p> <ul style="list-style-type: none"> • Identify the institution's total number and/or percentage of Year 2000 leased mission-critical environmental systems/properties versus Year 2000 owned mission-critical environmental systems/properties. 	<p><i>Identifying an institution's inventory of mission-critical leased verses owned systems/facilities will assist in determining a Year 2000 risk level. A greater level of risk is associated with leased systems/facilities because Year 2000 compliance is the responsibility of a third party (i.e., building mgt. company, lessor, etc.). However, since owned mission-critical systems/facilities are the responsibility of, and controlled by, the institution, a decreasing level of risk is indicated.</i></p>
<p>4. Identify the institution's total number and/or percentage of mission-critical facilities/properties that are located overseas or outside of the United States.</p>	<p><i>Identifying an institution's inventory of mission-critical systems/facilities located domestically versus overseas or outside of the United States will assist in determining a Year 2000 risk level. A greater level of risk is associated with systems/facilities located overseas or outside of the United States. This is primarily due to the higher level of uncertainty regarding measures in place to address the Year 2000 outside of the United States.</i></p>
<p>5. Determine whether management has contacted the lessors, vendors, manufacturers, and/or third-party providers on the compliance status of mission-critical environmental systems.</p> <ul style="list-style-type: none"> • Describe the level of response from the lessors, vendors, and/or manufacturers • Determine the percentage of written/verbal compliance for mission-critical environmental systems from the lessors, vendors, and/or manufacturers 	<p><i>The procedure will assist in determining the level of communication between the institution's management and lessors, vendors, manufacturers, and/or third-party providers. This process should use metrics (measurement criteria) such as the percentage of written/verbal compliance for mission-critical leased systems, and the level of response for vendors/manufacturers for mission-critical owned systems.</i></p>
<p>6. On at least a quarterly basis, determine whether management provides status reports detailing the institution's mission-critical environmental systems Year 2000 efforts, particularly internal assessment efforts and the ability of the institution's lessors, vendors, manufacturers, and/or third-party providers to provide Year 2000 compliant environmental systems in the mission-critical building facilities (leased and owned).</p>	<p><i>This procedure refers to assessing the reporting system contained within the project management function, including how the Year 2000 project manager tracks progress against established task completion dates and milestones. This process could also include a review of the adequacy of information reported to senior managers.</i></p>
<p>7. Determine whether the Year 2000 systems strategic/project plan addresses the Awareness, Assessment, Renovation, Validation, and Implementation phases.</p>	<p><i>This procedure refers to assessing the institution's Year 2000 strategic/project plan to determine whether it is following the FFIEC Year 2000 phases or whether similar phases have been developed.</i></p>

8. Discuss any major problems anticipated by management towards achieving Year 2000 mission-critical environmental system compliance.	
Community Banks – Assessment	
<p>1. Determine whether the institution has completed the assessment of its owned mission-critical environmental systems (i.e., compliant, non-compliant, non-applicable, etc.).</p> <ul style="list-style-type: none"> Has the institution completed the assessment of its owned environmental systems? If so, when was the assessment completed? Who was responsible for performing the assessment of the owned environmental systems (i.e., in-house bank personnel, external consultants, etc.)? How did the bank determine the compliance status of its mission-critical owned environmental systems (i.e., documentation from manufacturers and/or vendors, etc.)? What is the approximate percentage of mission-critical owned environmental systems that are: <ul style="list-style-type: none"> Compliant? Non-compliant? Non-applicable? 	<p><i>Institutions should have completed the assessment phase by September 30, 1997; however, some may have reassessed their systems or reassigned priorities causing delays in schedule. If the assessment is not complete, determine the percentage of systems or facilities* with assessments ongoing (*Institutions may classify their assessment inventory at either the system level or the facility building level).</i></p> <p><i>This procedure should identify who is responsible for performing the assessment of owned systems, when the assessment was completed, how the institution determined the compliance status of owned systems, and percentage of owned systems that are: compliant, non-compliant, and non-applicable.</i></p>
<p>2. Determine whether the bank has worked with its lessors, vendors, manufacturers, and/or third-party providers to complete the assessment of its leased mission-critical environmental systems.</p> <ul style="list-style-type: none"> Has the responsible party (i.e., lessor, etc.) completed the assessment of leased environmental systems? If so, when was the assessment completed? Who was responsible for performing the assessment of the leased environmental systems (i.e., lessor(s), in-house bank personnel, etc.)? How did the responsible party determine the compliance status of the mission-critical leased environmental systems (i.e., documentation from manufacturers and/or vendors, etc.)? What is the approximate percentage of mission-critical leased environmental systems that are: <ul style="list-style-type: none"> Compliant? Non-compliant? Non-applicable? 	<p><i>This procedure will assist in determining the level of communication between the institution's management and lessors, vendors, manufacturers, and/or third-party providers. The procedure should identify who is responsible for performing the assessment of leased systems, when the assessment was completed, how the institution determined the compliance status of leased systems, and the percentage of leased systems that are compliant, non-compliant, and non-applicable.</i></p>
Assessment Phase Summary	

Renovation Phase <p>This section is designed to determine whether the institution will complete mission-critical environmental systems Year 2000 renovations using methods consistent with safe and sound practices. The renovation phase evaluates environmental systems' Year 2000 repairs, replacement, and retiring to include related upgrades and system replacements. For institutions relying on outside service providers, ongoing discussions and monitoring of vendor progress will be necessary.</p>	
Work Steps – Large Banks <ul style="list-style-type: none"> Review the renovation section of the institution's Year 2000 strategic/project plan for mission-critical environmental systems. Review a sampling of the correspondence to/from the institution's Year 2000 owned (or leased) building properties/environmental systems' lessors, vendors, and/or manufacturers. Review a sampling of the inventory of mission-critical non-compliant environmental systems to verify whether the report identifies the method to be used to renovate each of these systems (e.g. repair, replace, retire, etc.) 	
Work Steps – Community Banks <ul style="list-style-type: none"> Review a sampling of the inventory of mission-critical non-compliant environmental systems to verify whether the report identifies the method to be used to renovate each of these systems (e.g., repair, replace, retire, etc.). Gain an understanding of the bank's strategies for renovating non-compliant owned and leased environmental systems. 	
Examination Procedures	Comments
Large Banks – Renovation	
1. Determine whether the renovation of mission-critical non-compliant systems includes relevant critical dates, replacement/upgrade timeframes and cost/replacement analysis.	<i>The institution's renovation strategy should identify all relevant critical dates (i.e., outside cut-off dates, etc.) and the timeframes and costs associated with replacement or upgrade.</i>
2. Determine the renovation completion percentage of mission-critical non-compliant environmental systems owned by the institution. <ul style="list-style-type: none"> Identify the institution's renovation milestone dates for mission-critical non-compliant environmental systems that have not been repaired or replaced. 	<i>This procedure refers to assessing the status of renovating non-compliant systems that are owned by the institution. This process uses metrics (measurement criteria); the percentage of mission-critical owned systems that have been repaired, replaced, or retired, and the institution's milestone completion dates for renovation.</i>
3. Determine the renovation completion percentage of mission-critical non-compliant environmental systems that are leased or are located in leased buildings. <ul style="list-style-type: none"> Identify the lessors, vendors, and/or manufacturer's repair or replacement milestone dates for mission-critical non-compliant leased environmental systems. 	<i>This procedure refers to assessing the status of renovating non-compliant systems that are leased by the institution or are located in buildings leased by the institution. This process should use metrics (measurement criteria) such as the percentage of mission-critical leased systems that have been repaired, replaced, or retired, and/or the vendor/manufacturer's milestone completion dates for renovation.</i>

4. Determine whether an adequate process has been established to track renovation efforts of mission-critical environmental systems/properties.	<i>Institutions should have a method or process in place for monitoring the renovation efforts of their vendors, manufacturers, or service providers. The process should also address the renovation efforts performed in-house.</i>
5. Determine who is going to perform the renovation. Ensure vendor/manufacture is closely involved.	<i>For all mission-critical leased and owned systems, the institutions should identify who is performing the renovation. For renovation of owned systems, it is recommended that the vendor/manufacture be closely involved in the renovation process.</i>
6. Determine whether the institution has ensured that any mission-critical environmental systems being replaced are replaced with Year 2000 compliant systems.	<i>Management should be assured that any new products purchased or replaced are Year 2000 compliant.</i>
Community Banks – Renovation	
1. Determine whether the responsible party (i.e., bank, lessor, etc.) has identified a strategy (i.e., repair, replace, upgrade, etc.) for renovating non-compliant mission-critical environmental systems. <ul style="list-style-type: none"> • Does the renovation strategy address owned and/or leased environmental systems? • What types of mission-critical environmental systems were discovered to be non-compliant (e.g. fire/life safety systems, energy management systems, security systems)? • What is the role of the manufacturers and/or vendors in the renovation process? • How does the institution plan to renovate (repair, replace, upgraded, retire, etc.) its non-compliant systems? • What is the approximate renovation completion percentage for the institution's non-compliant mission-critical environmental systems? 	<i>This procedure assists in determining the renovation strategy (repair, replace, upgrade, etc.) the institution plans to implement for any identified non-compliant mission-critical environmental systems. For all mission-critical leased and owned systems, the institution should identify who is performing the renovation. For renovation of owned systems, it is recommended that the vendor/manufacture be closely involved in the renovation process.</i>
Renovation Phase Summary	

Validation Phase This section is intended to determine the adequacy of the institutions' compliance with guidance and accepted procedures for validating mission-critical environmental systems for Year 2000 readiness. It is the responsibility of the bank to ensure that Year 2000 environmental systems risks are effectively evaluated and managed. For further guidance, refer to the FFIEC Guidance Concerning Year 2000 Readiness.	
Work Steps – Large Banks <ul style="list-style-type: none"> Obtain and review the Year 2000 validation policies, practices, or procedures for mission-critical environmental systems. <p><i>Practices and procedures for validating the environmental systems may not be in writing and therefore may need to be reviewed with management to obtain an understanding of them.</i></p> <ul style="list-style-type: none"> Obtain and review the validation strategies and plans for the mission-critical environmental systems. Obtain and review a sample of Year 2000 mission-critical environmental systems' testing documentation including tests results from the institutions' property management unit (for owned facilities), lessors, vendors, and/or manufacturers. Obtain a sample of test documentation for mission-critical environmental systems and determine whether an adequate audit trail exists to support the institution's Year 2000 testing process. Documentation should address the testing guidelines/criteria identified in Procedure 6. 	
Work Steps – Community Banks <ul style="list-style-type: none"> Gain an understanding of the validation strategies and plans for the mission-critical environmental systems. 	
Examination Procedures	Comments
Large Banks– Validation	
1. Determine whether the institution has met or will meet the following FFIEC key milestones in the Year 2000 mission-critical environmental systems validation process: <ul style="list-style-type: none"> June 30, 1998 – Complete the development of its written validation strategies and plans for mission-critical environmental systems. September 1, 1998 – Commence validation of internal (owned) mission-critical environmental systems. December 31, 1998 – Validation of mission-critical internal (owned) environmental systems should be substantially complete. Lessors, vendors, and/or manufacturers should be ready to test leased environmental systems. March 31, 1999 – Validation by lessors, vendors, and/or manufacturers of mission-critical leased environmental systems should be substantially complete. June 30, 1999 – Validation of all mission-critical systems should be complete and conversion to the new systems should be substantially complete. 	<i>The key milestones are taken from the April 10, 1998, Interagency Statement "Guidance Concerning Testing for Year 2000 Readiness."</i>

<p>2. Determine whether the written validation strategy and plan for environmental systems includes:</p> <ul style="list-style-type: none"> • A description of the testing environment in place. • Testing methodology (e.g., vendor/manufacturer testing, in-house testing). • Types of tests (e.g., proxy, bench, future date, etc.). • Testing schedules. • The allocation of human and financial resources • Testing of relevant critical dates. • Documentation of test results (e.g., print outs of diagnostics, etc.) • Integration testing between the institution's mission-critical environmental systems that interface with other mission-critical environmental systems (e.g., fire alarm control system and security system) as applicable. • Routine management reporting. 	<p><i>This procedure refers to assessing the adequacy of an institution's compliance with regulatory guidance regarding testing and the institution's plans and procedures for validating mission-critical systems for Year 2000 readiness. Testing environment, methodology, and types of tests performed should be addressed in the institution's validation strategy. Refer to the April 10, 1998, Interagency Statement "Guidance Concerning Testing for Year 2000 Readiness" for the definitions of the types of testing. Management should review each system for critical dates in determining the scope of testing. Critical dates may not include all the dates listed in the Interagency Guidance or may include dates specific to the system. Management should document its rationale for selecting or not selecting these dates.</i></p>
<p>3. Determine whether the institution has:</p> <ul style="list-style-type: none"> • Identified management and staff with appropriate technical knowledge and skills to manage the Year 2000 mission-critical environmental systems' testing process. • Identified staffing and training needs for those involved in Year 2000 mission-critical environmental systems' testing. • Allocated resources (hired, trained, or engaged employees) to perform and analyze Year 2000 mission-critical environmental systems' tests. • Coordinated, when appropriate, Year 2000 mission-critical environmental systems' testing with its lessors, vendors, and/or manufacturers. 	<p><i>This procedure refers to assessing the institution's resource structure for performing Year 2000 testing of mission-critical systems.</i></p>
<p>4. Determine whether the evaluation of the testing process includes participation by project managers, person(s) responsible for the operation of the mission-critical environmental systems, or independent third parties (internal/external auditors, vendors/manufacturers, lessors, or other qualified sources).</p>	<p><i>It is important to have the testing process evaluated by those who must execute it. This helps ensure the effectiveness of the process and its integrity. Other qualified sources could include any knowledgeable person(s) who is (are) not directly involved in the Year 2000 project.</i></p>
<p>5. Evaluate the institution's processes to test whether mission-critical environmental systems will remain Year 2000 compliant following enhancements or modifications.</p>	<p><i>Management should review the Year 2000 possibilities of environmental systems enhancements or modifications and determine whether subsequent testing is necessary.</i></p>
<p>Community Banks – Validation</p>	
<p>1. Determine when the responsible party (i.e., bank, lessor, etc.) will validate, implement, and certify Year 2000 compliance for all mission-critical owned and leased environmental systems.</p> <ul style="list-style-type: none"> • What has the institution accomplished with regard to testing its mission-critical environmental systems? • Has the institution involved its manufacturers and/or vendors in determining the appropriate environmental systems testing strategies, milestones, etc.? 	<p><i>This procedure refers to assessing the adequacy of an institution's compliance with regulatory guidance regarding testing and the institution's plans and procedures for validating mission-critical systems for Year 2000 readiness. Testing environment, methodology, and types of tests performed should be addressed in the institution's validation strategy. Bankers must work closely with vendors and/or manufacturers to define these strategies. Additionally, bankers should establish milestones when working with</i></p>

<ul style="list-style-type: none">• Where does the institution stand in completing Year 2000 compliance testing and certification for mission-critical environmental systems?	<i>the third parties and obtain documentation once validation is complete. Following completion of this phase, the effectiveness of the process and its integrity should be evaluated. Systems can then be certified, once the banker is confident that appropriate steps have been taken to ensure compliance of all mission-critical systems.</i>
Validation Phase Summary	

Implementation Phase <p>During a review of the implementation phase, the focus should be on the adequacy of management's implementation plan and internal controls governing the migration process. During the implementation phase, mission-critical environmental systems should be verified as Year 2000 compliant and be accepted by the business users. Any potentially non-compliant mission-critical environmental system should be brought immediately to the attention of management for resolution. In addition, this phase must ensure that any new mission-critical environmental systems or subsequent changes are compliant with Year 2000 requirements.</p>	
Work Steps – Large Banks <ul style="list-style-type: none"> Review the implementation portion of the institution's Year 2000 mission-critical environmental systems' strategic/project plan. Obtain and review the institution's implementation schedule for mission-critical environmental systems, if it is not included in the project plan. Review a sampling of the correspondence from the mission-critical environmental systems' lessors, vendors, and/or manufacturers. 	
Work Steps – Community Banks <ul style="list-style-type: none"> Ensure implementation was completed with completion of the renovation and validation phases. 	
Examination Procedures	Comments
Large Banks – Implementation	
1. Determine whether the institution's plan/process for implementation of repaired or replaced mission-critical environmental system applications and/or components into the institution's production environment includes: <ul style="list-style-type: none"> Implementation procedures. Milestone dates. Documented sign-off by management and business users. Methods the organization will use to validate the mission-critical environmental systems' implementation. 	<i>This procedure refers to assessing that mission-critical systems are verified to be Year 2000 compliant and are accepted by the business users. For most environmental systems, the validation and implementation are phases performed concurrently.</i>
2. Determine whether management has procedures in place to correct mission-critical environmental system problems discovered after implementation and retest those systems after corrections are made.	<i>The focus should be on a process to correct mission-critical systems if they fail the validation and implementation phase.</i>
3. Determine whether user training programs and documentation (user manuals, system manuals, etc.) have been updated to reflect any changes resulting from Year 2000 mission-critical environmental system modifications.	
4. Determine whether the organization can implement backup mission-critical environmental systems in the event newly renovated systems/applications fail during the implementation process.	

Community Banks – Implementation	<i>For nearly all environmental systems the renovation, validation, and implementation phases are conducted concurrently. However, refer to the large bank implementation examination procedures for additional guidance in the implementation phase.</i>
Implementation Phase Summary	

Contingency Planning Phase	
This section reviews the institution's plans to address remediation and business resumption risks to core business functions that rely on mission-critical environmental systems. Objectives are to determine: 1) that institution management has developed, tested, and implemented contingency plans for mission-critical environmental systems; 2) whether contingency plans focus on core business functions that pose the greatest risk if lost or seriously compromised by Year 2000-related mission-critical environmental system failures. For further guidance, reference the Interagency Statement entitled "Guidance Concerning Contingency Planning in Connection with Year 2000 Readiness."	
Work Steps – Large Banks	
<ul style="list-style-type: none"> Obtain and review any reports or documents provided to the board of directors, a committee thereof, or senior management pertaining to mission-critical environmental systems' Year 2000 remediation contingency planning and business resumption contingency planning. Obtain and review a sample of mission-critical environmental systems' risk analyses developed for core business functions. Obtain and review the institution's mission-critical environmental systems' Year 2000 remediation contingency plans and business resumption contingency plans for a small sample of building sites (owned/leased). 	
WORK STEPS – COMMUNITY BANKS	
<ul style="list-style-type: none"> Gain an understanding of the efforts in place to address Year 2000 remediation contingency planning and business resumption contingency planning for mission-critical environmental systems. 	
Examination Procedures	Comments
Large Banks – Contingency Planning	
1. Determine how Year 2000 mission-critical environmental systems' contingency planning is coordinated with existing contingency, disaster recovery, and/or business resumption plans.	<i>The Year 2000 contingency plan could be part of the business resumption contingency planning document or an existing disaster recovery plan.</i>

<p>2. Evaluate whether mission-critical environmental system contingency planning addresses the following:</p> <ul style="list-style-type: none"> • Possible alternative solutions (including the consideration of alternative vendors, manufacturers, or service providers, in the event mission-critical environmental system remediation efforts are not successful or cannot be completed). • Trigger dates for activating an alternative plan (taking into account the functionality and time needed to deploy alternative solutions) and assignment of responsibility to an individual or team for implementing the business resumption plan. • Documentation of equipment necessary for recovery (e.g. electric generators). • If applicable, determine whether the mission-critical environmental systems hardware and software at any off-site backup locations are Year 2000 compliant. • If manual operations of the system(s) is to be relied on as a backup measure, whether the institution has written manual operating procedures to follow and whether they are a viable option. • If key personnel (e.g. building engineer) are trained and available to implement the resumption plan. 	<p><i>This procedure is consistent with the guidance in the Interagency Statement entitled “Guidance Concerning Contingency Planning in Connection with Year 2000 Readiness” dated May 1998. The milestones are covered in the reference material entitled “Year 2000 Supervisory Milestones”. In the event renovation efforts are not successful, the institution needs to set forth specific dates as to when action would have to be taken to purchase or convert to an alternative system/product. Trigger dates for activating contingency plans should take into consideration the time needed for a conversion. The institution should perform a risk analysis to determine what functions are critical to maintain and what functions can be given a lower priority. Size and complexity of the institution will dictate how detailed the written manual processing procedures need to be. The examiner may also verify that use of manual procedures, as backup is a feasible solution.</i></p>
<p>3. Evaluate how the institution has verified that its designated backup site has adequate capacity for potential Year 2000 demands.</p>	<p><i>Ensure that the designated backup site has the adequate capacity for potential Year 2000 demands.</i></p>
<p>Community Banks – Contingency Planning</p>	
<p>1. Determine when business resumption contingency plans will be reviewed/updated or developed for all mission-critical environmental systems.</p> <ul style="list-style-type: none"> • How does the institution’s Year 2000 mission-critical environmental systems’ contingency planning coordinate with the institution’s overall contingency, disaster recovery, and/or business resumption plans? 	<p><i>In the event renovation efforts are not successful, the institution needs to set forth specific dates as to when action would have to be taken to purchase or convert to an alternative system/product. Trigger dates for activating contingency plans should take into consideration the time needed for a conversion. The institution should perform a risk analysis to determine what functions are critical to maintain and what functions can be given a lower priority. Size and complexity of the institution will dictate how detailed the written manual processing procedures need to be. The examiner should verify that use of manual procedures, as backup is a feasible solution. The Year 2000 contingency plan could be part of the business resumption contingency planning document or an existing disaster recovery plan.</i></p>
<p>Contingency Planning Phase Summary</p>	